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DAKOTA ZEPHYR---SPECIAL EAST RIVER EDITION

THIS ISSUE OF THE DAKOTA ZEPHYR CONTAINS
STORIES, INFORMATION AND PROGRESS REPORTS
FROM THE SOIL CONSERVATION DISTRICTS EAST
OF THE MISSOURI RIVER.

Brome Pastures and Beef Production Result in Returns of \$36 Per Acre

"In the spring of 1940 I seeded 26 acres
to brome and alfalfa. This seeding was
on land that had been in small grain in
1939. This 26 acres was adjacent to ten
acres of good native pasture.

"I did not pasture this new seeding until
July 1942 when I turned in 59 head of
mixed feeders, and they were on this com-
bined pasture during July, August, and
September of 1942. I weighed them when I
turned them in in July and weighed them
when I took them out the last of September.
The average gain was 180 lbs. per head for
the three-month period. They liked the
brome and alfalfa much better than the na-
tive grasses and grazed mostly on the
brome pasture.

"This was a gain of better than \$23.00 per
head, figuring the selling price at \$13.25
per CWT. This gave me a gross return on
my pasture land of \$36.00 per acre which I
figure is higher than I could receive from
corn ground over a period of years.

"In addition to this gross return in dol-
lars and cents, I am building up and hold-
ing the soil for future generations. I be-
lieve grass is the best balanced ration
and by far the cheapest you can raise."

The above story of J. J. Robertson, living
east of Alcester, demonstrates that a
brome pasture is a good example of "food-
for-freedom" production. Mr. Robertson is
a cooperator in the Sioux-Brule Soil Con-
servation District.

Crested Wheat Proves Valuable Pasture

William F. Dinger, cooperator in the
Brown-Marshall District, says he likes
crested wheatgrass because it is easy to
establish, is highly relished by his live-
stock, and, what is more, it comes on early
in the spring and also gives good pasture
in the fall of the year.

Mr. Dinger stated that he planted 10 lbs.
of crested with a half-bushel of flax per
acre on 15 acres in the spring of 1941. He
harvested 12 bushels of flax per acre and
figured he had no grass as it was not no-
ticeable during harvest, but by September
first of that year the field began to
green up and by late fall he had a good
green cover of grass.

The grass started early in 1942 and by
April 10 he turned 28 head of stock in the

field until May 20 taking 21 head out for summer pasture, leaving seven cows on the field all summer. The seven cows had all they needed and then some, as Mr. Dinger stated he combined over 1,600 pounds of crested wheatgrass seed from the field.

* * *

Contour Farming Pays Big Dividends

Ross Howen, farmer living south of Tabor in the Scotland Soil Conservation District, goes "all out" for contouring.

In 1942, Mr. Howen contour-farmed all of his cropland on his half-section farm except one field. Most of it was contour strip cropped with corn and oats.

Oats showed an increase of three bushels per acre in favor of the contouring, and his several varieties of corn yielded from 35 to 90 bushels per acre. The 35-bushel yield was on slopes with the corn listed up-and-down the hill. The same variety of corn planted with a lister on the contour yielded 46 bushels per acre. The 90-bushel corn was a hybrid variety listed on the contour.

Ross Howen said, "I never had any better corn in Iowa." He also stated, "I had to give up listing my corn previously because the soil washed so badly, but now by using contouring, listing is the only way to plant on sloping land like mine. I can also control the creeping jenny better with a lister. This year I want my other field contoured and I intend to construct a small terrace on each of the contour guide lines by using a plow and possibly a light blade!"

Last summer just after a five-inch down-pour of rain, Mr. Howen said, "There was very little runoff and even if I do not get much larger yields, I know I have saved my soil. I cannot help but get larger yields since I have a better stand of plants -- none of my corn washed out."

* * *

A Little Help Helps A Lot

Six hundred and ten bushels of corn from ten acres isn't unusual, but it is unusual when it comes from land that never raised a good crop before.

Jeppa Larson, county AAA committeeman and cooperator with the Clay County District, had a ten-acre field that was contour farmed in 1942. The land is poor because of erosion and the slope is 7%. In spite of these drawbacks it averaged up well with other corn in the neighborhood and exceeded the yield of some.

Larson figures that 1942 was a good year with respect to rainfall, but without contouring he couldn't have held the rainfall on account of the slope. He believes that while contour farming isn't a cure-all, it is a good medicine on rolling land. It gives nature a lot of help in raising a crop.

* * *

Roberts Soil Conservation District Expands

The Roberts Soil Conservation District, which was organized in 1941 and is one of the largest South Dakota districts east of the river, has approved the addition of sixteen additional townships to include the entire county. February 10 was the date for the referendum. This addition increased the acreage of the district to approximately 650,000 acres and includes 3,000 farm units.

The district supervisors approved the request to include the entire county in the soil conservation district as they felt that a more complete erosion control and conservation program could be carried out on a county-wide basis.

During the past year, 77 cooperative agreements were planned with cooperators bringing the total number of cooperators to 118 with 26,356 acres of land under agreement.

* * *

Easier Faster Shucking Contour Drilled Corn

"A few years ago I helped a neighbor shuck corn. He had his corn drilled and when I started to shuck I didn't like it so well, but before I got through I made up my mind it was a lot easier and faster to shuck drilled corn than checked corn for you did not have to reach over three feet, four inches because the ears were all in a line. This saved a lot of lost motion," so stated Dennis Danielson, living southeast of Alcester, Union County, South Dakota.

Mr. Danielson contoured one field of corn this past year and when asked if he had any trouble in keeping his corn clean on the contour, he replied, "No, if a man learns how to properly set the shovels on his cultivator, he can keep contoured corn clean just the same as checked corn."

The board of supervisors plan to assist in organizing "jenny rings" in 1943 to control the creepers; and actually operate two of these "jenny rings."

* * *

Wind Eroded Area Reclaimed-Now Productive

Mr. Danielson will plant all his corn on the contour in 1943 and he stated he would not think of planting corn any other way, especially on sloping hillsides.

Mr. Danielson further stated that he could not figure it took any more time to plant and cultivate contour corn than with checked corn.

"Sure, I might have a few short rows, but I have so many more long rows that when you figure the time for planting and cultivating a field of corn, there is practically no more time one way or another. In addition I know I am stopping erosion and storing rainfall." Mr. Danielson continued by saying, "Contour farming may not show up in increased yields during a year with plenty of moisture but in a dry year I am sure contouring will be way ahead of up-and-down hill planting."

* * *

"Creeping Jenny" Is Number One Problem

The controlling of field bindweed (creepers) is considered the number one problem in Bon Homme County for no other single problem decreases yields and increases labor costs more than creepers.

Mr. Guy Maynes of Houghton, South Dakota, is the owner of some badly wind eroded land in the Brown-Marshall Soil Conservation District. During 1940 Mr. Maynes bought an additional half-section which was considered practically no good from an economic point of view. With the assistance of the Brown-Marshall Soil Conservation District, however, he has been able to level off large portions of the badly eroded land and establish cover. By now in 1943, he has reclaimed approximately three-fourths of this half-section of land on which he has produced during the past year corn averaging 25 bushels per acre and oats around 30 bushels per acre.

Mr. Maynes is very enthusiastic on subsurface tillage work, using a wheatland disc for tilling, thereby leaving the crop residues on the surface to help in controlling the movement of the soil. He is also very enthusiastic on the possibility of tree strips in helping to control the velocity of the wind. He has established belts at forty-rod intervals on this half-section with which he hopes in the future to practically remove most of the difficulty in wind erosion from the cultivated areas of the half-section.

* * *

The board of supervisors of the Emanuel-Choteau Creek District operated one full year of weed control in 1941; and one year of follow-up on the same fields in 1942 in cooperation with a multiple landowner. The results of this demonstrational and educational work are very gratifying. Yields of rye, which was used as a smoother crop following black fallow, were nearly doubled. The best yields of rye and the best weed kill occurred where there was no fall or early spring grazing. This was on two of the sixteen farms and the yields were 36.8 and 34.7 bushels per acre. Following the harvest of the rye crop in 1942, estimates on the percentage of weed kill were made on all farms. On these fields that were black fallowed one entire season, the percentage of eradication was as high as 90%.

Cooperative plans were formulated between the Brule-Buffalo supervisors and Brule County commissioners to establish grass seeding on county land subject to considerable wind erosion. A five-year plan was negotiated in 1938. The district was to receive all soil building payments for making a seeding of grass. After several attempts and reverses, a stand of wheatgrass was established in the fall of 1940. Harvesting of seed from this district plot of 80 acres last fall brought approximately 20,000 pounds of seed which at the present time is being sold to farmers at nominal charges.

Summarizing the advantages of this project (1) it has made available a source of locally grown seed; (2) because of its strategic location; many farmers have had the occasion to observe the seed plot, and judging from inquiries received, this factor has been influential in many farmers doing considerable grass seeding last fall; (3) it established a precedent with the county commissioners to seed down a large acreage of county owned land to crested wheatgrass and thereby make better use of land; (4) it has returned some income to the district supervisors which will be used for the betterment of the community.

* * *

Subsurface Tillage Increases Yields

The Carpenter Soil Conservation District has received the following comments on subsurface tillage from cooperators of the district.

Mr. Madsen says, "I tilled about 200 acres with the Dempster subsurface tillage machine with the 15-inch blades in the fall of 1941. The ground was in better condition for seeding and I could get in the fields that were subsurface tilled about a week earlier; also there was no water standing in the low spots as compared to the fields that were not subsurface tilled. In all cases, I got an increased yield on the fields that were subsurface tilled."

Mr. Bertlesen states he had two fields side by side, one was tilled in the early fall of 1941 with a lister equipped with the pence blades; the other field was summer fallowed. They were both drilled to cereals wheat at approximately the same time. On combining these two fields of wheat the subsurface field yielded considerable more. The grain was thicker on the summer fallowed field due to stooling, but had shorter heads.

The supervisors of the Carpenter Soil Conservation District are encouraging subsurface tillage in the district as one way to help meet the crop production goals of farm crops which are badly needed. To help this practice along, the supervisors have three subsurface tillage machines and have also purchased another Dempster subsurface machine equipped with both types of blades which are loaned to district cooperators.

New Cooperator Really Likes Contouring

Alfred Dybedahl is a district supervisor and a cooperator in the Minnehaha Soil Conservation District. His first experience at contour farming was when he planted 65 acres of corn on the contour in 1942.

"A man has to adjust himself to contour farming; then it is easier than the old way. For instance, when planting he must see to it that the planter is properly centered over the marker mark. When sharp V shaped corners develop, a two-rod strip of sudan grass or some such crop should be planted along the point of the V to provide a place to make the turn with machinery. Waterways should be seeded to grass to drain away surplus water. I believe my corn crop is one-third larger due to contour farming and I am saving my soil," said Mr. Dybedahl. When asked if he had any trouble with his machinery operating on the contour, he replied, "No, in fact it is easier to operate. For instance, when picking corn, we went right along without a bit of trouble but when picking for my neighbor we were having trouble pulling up the hill and crossing drainage ways. We had to shift to a low gear to make it up the hill, and when crossing drainage ways, the pickup points would stick into the ground causing trouble."

In reply to a question as to whether or not he had a lot of short rows, he said, "Well, you are bound to have some short rows but the time you save by having long rows more than offsets the time and inconvenience of the short rows. When I get my farm completely laid out on a soil conservation basis, I can operate more efficiently than I do now. I want some soil left on this farm for my boy when he grows up and is ready to take it over."

* * *

A Complete Farm Plan-In Three Chapters

West of Springfield, Floyd Spohn operates a farm on a share basis with R. De Roos. In the three-year period since the soil conservation district was organized, many changes have occurred on this farm.

Chapter I - 1940 - four acres of trees were planted on the contour for a farmstead windbreak. Lines were staked out for contour farming.

Chapter II - 1941 - diversion ditches, water spreaders, and terraces were constructed.

Chapter III -- 1942 -- contour strip cropping, contour farming, tree maintenance, wind strip cropping, and dam construction were carried out on the farm.

This farm is typical of the manner in which complete conservation plans are gradually developed. As the conservation practices prove their value in a community, their use increases.

* * *

Tulare-Redfield District Reports Progress

Working agreements were signed with the Tulare-Redfield Soil Conservation District by 76 farmers during 1942, according to a report on the activities in the district last year made by W. A. Tubandt, chairman of the district board.

Main objectives for the year were the re-seeding of idle land to grass, establishing farmstead tree shelterbelts, eradication of noxious weeds, wind strip cropping and subsurface tillage; the annual report by the supervisors shows good progress in all of these lines.

During the 1942 period, a total of 761 acres of idle or formerly cropped land was reseeded to crested wheatgrass. Approximately 44,000 trees and shrubs were planted on 30 farm homes as protection, source of fuel, and beautification. Twenty-four infested acres of leafy spurge were chemically treated while approximately 12 acres were held in check by use as sheep pasture.

Tillage practices to destroy creeping jenny were started on 60 acres in the district, and subsurface tillage designed to retain crop residue and prevent erosion was practiced on 1,147 acres, as well as wind strip cropping on 12,828 acres.

Other activities during 1942 included contour farming of 45 acres, salvaging of 3200 rods of fence, and the construction of two livestock dams containing a total of 3,000 cubic yards.

* * *

Contour Farming Benefits Gently Sloping Field

Melvin Hatlestad planted 60 acres of corn, soybeans and cane on the contour in the Minnehaha District this year.

When asked if he had any difficulty keeping his field clean, he said, "No, no more trouble than checked corn if a man will be sure to kill the weeds when they are small. That same practice, of course, should be used when corn is checked. I find that the farmers that keep their checked corn clean have no more trouble keeping contoured corn clean. I did make this mistake. I should have left a little wide turning space where the rows come to a V point. You will have some of that in drainage ways and on ridge tops." Attention was called to the fact that the slopes were very gentle, and he was asked if he considered it worthwhile to contour such gently sloping land. He replied, "Yes, very definitely so. I know I will never operate that field any other way than on the contour." Then he went on, "One night last summer during a heavy rain, I was looking out the window and whenever the lightning would flash and light up the field, it looked like a lake on a slope. The next day when I went out to take a look at the field, I found that very little of that water ran off. Just a little in drainage ways was all." When asked whether or not he planned to increase his contouring in 1943, his reply was, "Yes, I have an additional forty acres already laid out and I plan to take out all my inside fences and completely replan my farm on the basis of conservation farming; then it will be permanent."

* * *

Grass Seeding -- A War Crop

Farmers in the Elm Creek-Midland Soil Conservation District are doing their bit toward the war effort by seeding idle land back to grass and putting land to its most productive use. Over 1,000 acres on the farms of cooperators were seeded to grass last fall with seed furnished jointly through the district and individual cooperators.

The land seeded includes marginal cropland that has not produced profitable crops,

idle field that have grown up to weeds, and sloping land which was subject to sheet erosion and on which small gullies have started to form. The grass seed used was principally standard crested wheat-grass which should give increased returns for both hay and pasture after it is established. In this way this land will be put to a productive use as a war crop and help produce livestock, an urgent necessity for our Food For Victory program.

Future grass seedings will be made so as to establish proper land use and balance the farming units. Also the natural drainage ways that have been plowed up and have started to form gullies will be seeded back to grass and form grass drainage ways that will safely carry away the runoff water from flood rains and spring runoffs.

* * *

Stretching Acres

200 minus 20 equals 200. It looks like poor arithmetic but E. A. Gronlund of the Clay County District says it's right and he has the acres to prove it.

Gronlund, who farms southwest of Wakonda, had 20 acres of rough land that wasn't good farm land and was usually idle. In the fall of 1941 and again last fall, he seeded ten acres to brome grass and secured excellent stands. The twenty acres will normally provide all the pasture he needs. By so doing, it has released twenty acres of cropland formerly used for temporary pasture.

With normal crops he will raise 800 bushels of feed to fatten livestock from these twenty acres. At the same time, the land is being put to the use for which it is best fitted.

Gronlund thinks that every farmer can do the same. It's an easy way to increase the size of the farm without adding more acres.

* * *

"I Like My Contouring," Bradley Says

"I like my contouring," so stated Mr. H. E. Bradley, living ten miles south of Alcester, Union County, South Dakota.

"I used a rotary hoe in my corn this past year until it got too tall and then used

the cultivator. After the first cultivation, we had a heavy rain and I went out and checked over the contouring. I noticed that the ridges of soil left from the cultivator had caught the rainfall and the ridges had all leveled off which demonstrated to me that I had held the rainfall and it had soaked into the ground instead of running off down the hillside and taking my good soil with it. My yield this year demonstrated that it pays to contour row crops."

* * *

Turner County District Gets Under Way

This conservation district was organized June 6, 1942, through the combined efforts of farmers and businessmen in the southeastern part of Turner County. The purpose of the organization is to control the excessive wind and water erosion by recommended soil conservation practices.

To date, the district has received seventeen applications asking for assistance in establishing approved practices on farms within the area; eight of these applications have been surveyed and the conservation plan approved by the district board of supervisors.

The conservation practices that will receive special attention in 1943 includes construction of dikes and diversions along the Vermillion River, contour farming, reconditioning of depleted pasture land, tree planting, gully blading and the grassing of waterways.

* * *

Contour For War Production

Contour farming will increase food production for victory, is the opinion of the Larsgaard Brothers of the Lincoln Soil Conservation District.

One hundred and seventy-five acres of corn were harvested during the 1942 cropping season with an estimated yield of 11,000 bushels or an average of 63 bushels per acre. An actual record was kept of the corn harvested on a 20-acre field that was farmed on the contour. The total yield was 1,546 bushels or an average of 77 bushels per acre. This was the highest average yield of any field harvested though the slope was as steep as any field planted to

corn this year.

(7)

Crested Provides Good Fall Pasture

No doubt some of this 14-bushel per acre difference was due to the variety of corn, date of seeding, soil fertility, etc. However, the Larsgaard boys are satisfied that at least five bushels per acre was due to the contour farming rather than straight rows that disregard slopes.

The USDA has asked for a 5% increase of corn for 1943 in the area in the Lincoln District. If one-half of the acreage of corn allotted to this area were planted on the contour next spring, this goal could easily be met without increasing the acreage, judging by these results.

As a result of this experience, an additional acreage will be cultivated and planted to corn on the contour next year. The Larsgaard Brothers farm over 500 acres of land three miles southwest of Fairview, South Dakota in Lincoln County.

* * *

Former Pothole Becomes Productive Area

In 1940 contour guide lines were established and a diversion dike constructed on a farm operated by August Dolney of Webster and owned by the Union Central Life Insurance Company. The diversion dike was around a small pothole that had not produced a crop even in the drier years. Mr. Dolney constructed the dike with his plow building up the ridge by back furrowing and constructing the channel by having the dead furrow in the channel.

The dike was quite successful the first year but Mr. Dolney was able to take out some of the weakness the next spring so that in 1942 he harvested 100 bushels of wheat from the approximate four acres in the pothole.

The contour guide lines on the balance of the tilled land not only aided in increasing the yield but stopped the washing away of the topsoil from the hillside. Mr. Dolney is a firm believer in contour tillage and says that any inconvenience is more than offset by increased yield, less power in operating due to working on the level, and, most important, the retaining of the topsoil on the hillside where it originated and belongs.

In the fall of 1940, Mr. Bernard Donovan, living northeast of Hecla, South Dakota, decided to seed down 20 acres of badly eroded land which had a heavy cover of annual weeds. The seeding was made in the late fall around November 1. During 1941 a good stand of grass was obtained and Mr. Donovan clipped portions that could be clipped in order to remove weed competition.

During 1942, Mr. Donovan had a sufficient amount of grass other than the 20 acres to take care of his needs until October 1 and at that time, he turned in 65 head of cattle. All had sufficient feed for a month and a half or until November 15. Mr. Donovan reported that his milk cows seemed to give additional milk when turned on the crested wheat pasture and is well pleased with using crested wheat as a fall pasture.

* * *

Crested Wheatgrass as a War Crop

Mr. Joshua Hofer, one of the district supervisors and a cooperator of the Carpenter Soil Conservation District, reports the following experiences in establishing an 18-acre field of crested wheat on his farm.

"I first planted this field with a corn planter in rows in the fall of 1938 in cane stubble. I used approximately three pounds of seed per acre. The field was cultivated during the summer of 1939 but due to drouth and grasshoppers, a very poor stand was obtained.

"The field was seeded again in the fall of 1939 but only received about 40% stand for this seeding. By this time I was getting thoroughly disgusted and was of the opinion I should plow the field up as it was so infested with weeds and thistles.

"I made up my mind that I would try seeding this field once more, so in the fall of 1940 I seeded it again with the deep furrow drill. The weeds were so thick that they would gather under the drill and I would have to stop and remove them.

"In the spring of 1941, I had a fair stand with lots of weeds but when the fall rains came, the seed that had not sprouted in the spring came that fall and I had a perfect stand.

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Official Business

"In the spring of 1942, the grass came up early with an excellent stand. The weeds just seemed to disappear. The grass attained a height of about $3\frac{1}{2}$ to 4 feet and looked like a field of rye.

"I cut the field with a grain binder and shocked the bundles. After the bundles had dried out in good shape, I threshed it with a threshing machine.

"I sent a sample of the seed to State College. They reported that I had about 37% of chaff and 1% of weed seed. I would estimate that my field of 18 acres yielded approximately 500 pounds per acre of clean seed.

"I think this is one grass that can do a great deal in this area to help produce both beef and mutton for the war effort as it is very good to use both as hay and pasture. I seeded about 50 acres more this fall."

* * *

A Report From The NE Codington District

Farmers in the Codington District are requesting assistance for contour guide lines

and other conservation practices before spring planting. Theo. H. Peters says, "I know I am losing my soil by runoff water and I am planning to reduce this loss by contour farming."

Harry O. Weagel states, "I am going to save the water that ordinarily runs off by contour farming; then, too, I don't believe that my farm will become gullied if I contour farm."

* * *

Pasture Furrows Aid The Grass

A few years ago, A. P. Oxton, living three miles southwest of Andover and within the Day County Soil Conservation District, had a hillside in his pasture that was badly overgrazed. There was some short grass remaining but the hillside was so bare that none of the water was retained to encourage further growth of the grass.

Mr. Oxton had guide lines surveyed and contour furrows plowed with a single furrow plowed at intervals of about two rods. The grass gradually increased along these furrows spreading out so that now there is an excellent cover of grass most of which is buffalo grass.